OPHTHALMOLOGY.

UNDER THE CHARGE OF
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TRANSPLANTATION OF SKIN-GRAFTS FOR THE CURE OF ECTROPION.

D. ARGYLL-ROBERTSON (Edinburgh) describes (*The Practitioner*, August, 1896) the method he has pursued for the relief of ectropion. To insure success the following conditions must be obtained: 1. Immobility of the eyelids; 2. The formation of a graft that will accurately fit the raw surface to be covered; 3. The removal of all fat and cellular tissue from the graft; 4. The retention of the graft in apposition to the raw surface with the least possible injury to or interference with the transplanted skin; 5. The use of suitable antiseptic applications.

1. To secure immobility simple stitching of the lids together (without paring the edges) keeps them fixed for a period sufficiently long to enable intimate union of the graft with the raw surface to occur.

2. To fit accurately the raw surface he has employed the device of cutting out of a piece of paper an exact pattern of it, placing this pattern upon the skin at the part whence the graft is to be taken, and then making the necessary incisions parallel to the edge of the pattern, an allowance of about a fifth or a sixth of the width of the flap being made all around for shrinkage.

3. There is no necessity for great care in dissecting off the skin-flap to avoid the removal of fat or cellular tissue, as any that remains attached to the graft can easily be cut off subsequently with scissors curved on the flat.

4. To maintain the apposition of the graft, stitches at its margins were tried, but proved provocative of mischief. Robertson, therefore, has recourse to "tethering" or "cradle" stitches, which do not penetrate the transplanted skin, but pass across it and prevent its becoming displaced and penetrate the sound skin near the margin of the graft. For this purpose horsehair is employed, and care is taken not to draw upon the ligature more tightly than will just straighten the sutures that press over and "tether" the transplanted skin.

5. All oozing from the seat of operation having been checked by pressure, a gentle stream of corrosive sublimate wash (1:2000) should be allowed to flow over the surface of the graft and the adjoining skin, and thereafter finely powdered iodoform dusted freely over the region of the wound. The graft and immediately adjacent skin is covered with a small piece of cotton or linen rag smeared with iodoform-ointment. This in its turn is covered with a piece of lint soaked in corrosive sublimate solution (1:2000), and over

it a pad of cotton-wool. The other eye is covered with lint and cotton-wool, and both are bandaged moderately firmly and the patient enjoined to remain quiet in bed. The bandaging of both eyes helps to keep the site of operation free from all movement.

Unless pain be complained of, or there is some other reason for it, the dressing should not be changed for at least forty-eight hours; but the dressings should be reapplied for six or eight days more to the region of the operation. The stitch uniting the eyelids together and the "tethering" stitch may generally be removed on the fifth or sixth day after operation.

INFLUENCE OF COUNTRY AND RACE IN THE ETIOLOGY OF TRACHOMA.

DR. S M. BURNETT (Washington) discusses (*Ann. d'Oculistique*, March, 1896) the conclusions of VAN MILLIGAN (see this JOURNAL, January, 1896), and from a general review of the subject, including the materials upon which those conclusions were based, Burnett finds:

1. Trachoma is not an infectious and contagious disease, pure and simple. On the contrary, it is the expression of a diathesis or constitutional tendency, and may arise *de novo* or be excited by an attack of conjunctivitis of any kind. Dirt, filth, unhygienic surroundings, and improper living reduce the resisting power to all forms of disease, and in the case of trachoma still further increase the facilities for acquiring conjunctival inflammation, either primary or by contagion, which hastens the outbreak of the affection.
2. While it is no doubt true that high altitudes do not afford an entire immunity from the disease, there can be no question that trachoma flourishes, as a rule, much less in the mountains than on the plains; in which particular, as in many others, it bears a strong analogy to tuberculosis. He attaches, however, much more importance to the race than the altitude in the matter of immunity.
3. There are races that suffer much from the disease, and there are races which are but little affected; and there is one race in one country at least which seems to enjoy a practical immunity from its ravages.

TRUE IRITIS AND UVEITIS OF THE IRIS.

GRANDCLEMENT (Lyons) insists (*Lyon Médical*, tom. xxxii. No. 34) on the importance of clearly separating from iritis of the ordinary type certain cases hitherto classified with it, but in which only the posterior layer of the iris, the uvea, is involved. These cases he groups under the term uveitis. Comparison shows that the two affections differ in all respects as to symptoms, course, causes, and cure.

Uveitis is observed exclusively among women; iritis is more frequent among men. Uveitis always affects both eyes; iritis often affects but one. Uveitis lasts for years, and is manifested by slight periodic exacerbations, lasting five or six days; iritis is far more violent in its manifestations, but is cured in a month or two. The usual causes of iritis are syphilis, rheumatism, and gout. These are not the causes of uveitis, which causes are unknown. Atropine is of great value in the local treatment of iritis; but iridectomy is the only effective local treatment for uveitis.

The differential diagnosis during the attack may be made by noting that in iritis there is always marked discoloration of the anterior surface of the iris, which in uveitis is not perceptible. In iritis the pain and hyperæmia are violent; in uveitis pain is almost or quite absent and hyperæmia slight. In iritis, even apart from adhesions, the pupil dilates imperfectly with atropine; in uveitis it dilates freely, except in so far as it is bound down by old synechiæ.

TRAUMATIC PROLAPSE OF THE IRIS.

DAVID LITTLE (Manchester) has found that for prolapse of the iris it is the best practice (*British Medical Journal*, 1896, No. 1858) to slit up the sac through the whole length of the wound with a Graefe knife, and if the iris remains in the lips of the wound to excise it. Rapid healing takes place, and the best result is a firm and flat cicatrix, with little or no synechia, and the eye is left perfectly safe from future infection. He has never found eserine or atropine to reduce a prolapse, even when it has been very small and recent.

PARALYTIC SQUINT FROM LEAD-POISONING.

LAGLEYZE (Buenos Ayres) reports (*La Clinique Ophthalmologique*, 1896, No. 8) the case of a man who had received a charge of shot in the palm of the right hand. Some of the shot were removed, some escaped through suppuration, but seventeen remained in the hand. Soon after this he began to suffer with lead-colic, and later, shooting-pains, painful contractions of muscles of the extremities, severe cephalalgia, vertigo, and paresis of the right internal rectus. This paresis increased, and, after some months, ended in complete paralysis.

The patient's general symptoms continued. He was very thin, anæmic, skin yellow, nutrition profoundly affected. There had been exacerbations of the symptoms, apparently caused by disturbance of the imbedded shot by use of the hand. Seven years after the injury, and four years after the occurrence of the squint, the remaining shot were removed and prompt recovery of general health followed. But the squint remained, and the power of the muscle improved very little under the use of electricity.

THE ENDOTHELIAL LINING OF THE ANTERIOR CHAMBER.

A. ALT (St. Louis) has made a prolonged series of investigations concerning the endothelium of the anterior chamber, which he reports in the *American Journal of Ophthalmology*, 1896, Nos. 2–7. He finds that the endothelial lining of Descemet's membrane consists of a single layer of polygonal cells; but that the more or less regularly hexagonal form usually represented is rarely found. This is their condition of rest, but more frequently they are found active with retracted outline, leaving spaces between adjoining cells which are joined by thread-like connecting fibres. This condition of cell-activity was found in normal eyes, more in pathological eyes in which the anterior portions appeared normal, and almost without exception in eyes with pathological conditions affecting the anterior part of the eye. Alt believes that the cells can not only develop into lamellate connective tissue like the cornea, but that they originally develop the vitreous membrane of Descemet.

Regarding the angle of the anterior chamber, Alt thinks that its obliteration in certain cases is not alone due to pressure from behind, but to new-formed tissue, which when contracing pulls the iris periphery toward the sclero-corneal tissue. Schlemm's canal can with propriety be compared with the meningeal sinuses; and Alt has found short channels running into it, apparently connecting it with the angle of the anterior chamber.

The endothelial cells of the anterior surface of the iris do not, Alt finds, form a distinct membrane. These cells are unevenly distributed over the uneven surface of the iris, and may be traced into its wrinkles and crypts. He thinks that the newly formed connective tissue he has observed on the anterior surface of the iris in pathological eyes is in a great measure due to their proliferation.

OCULAR MANIFESTATIONS OF EYE-STRAIN.

ERNEST CLARKE (London), discussing the various manifestations of eye-strain upon the eye itself, and their bearing upon treatment (*Medical Press and Circular*, 1896, No. 22), states that blepharitis is invariably associated with an error of refraction; and that phlyctenular conjunctivitis has a marked association with ametropia, and the same is true of phlyctenular keratitis. In a large percentage of cases of scleritis he has found a marked error of refraction, and on correcting this with glasses the various remedies have worked like a charm. He believes the first and best treatment for recurrent iritis is correction of refractive errors. Eye-strain may cause an attack of glaucoma under favoring conditions, and there is a distinct association between astigmatism and cataract.

ILLUMINATION AND VISUAL ACUTENESS.

H. SNELLEN (Utrecht) reports in the Bowman lecture before the Ophthalmological Society of the United Kingdom (*Ophthalmic Review*, 1896, No. 176) some experiments upon the relation of illumination to the acuteness of vision. It was found that the relation between them was not expressed by any mathematical formula, but that the visual acuity rose with the illumination until the maximum of acuity was reached with an illumination of from thirty to fifty metre-candles (the standard candle placed at one metre). Beyond this increased illumination gave no improvement of vision, provided the retina had become adapted to the light.

Studying the illumination of workshops and factories by actual trial in such places, it was found that with waning light when it fell below 15 mc. work requiring accurate vision was actually impeded; and that this was the minimum that could be allowed. Weber's photometer he has found to be the best practical instrument for measuring the intensity of illumination.